

### **ABSTRACT OF THE DISCLOSURE**

A circuit system for wireless communications via two antennas. The circuit system includes a printed circuit board having a predetermined area devoid of a solder mask.

5 According to the invention, an antenna switch, filter, and power amplifier are mounted on the printed circuit board within the predetermined area. The antenna switch connects the filter and the power amplifier with the two antennas. The filter blocks unwanted frequency components in an RF

10 receive signal from either of the antennas. A transceiver is responsible for down-converting the RF receive signal a baseband receive signal and up-converting a baseband transmit signal to an RF transmit signal. A first matching network coupled between the filter and the transceiver

15 transforms the RF receive signal from single-ended to differential. Likewise, a second matching network coupled between the transceiver and the power amplifier transforms the RF transmit signal from differential to single-ended.